OPERATION LIFELINE: HEALTH CARE PROFESSIONALS FROM MARYLAND RESPOND TO HURRICANE KATRINA [1]

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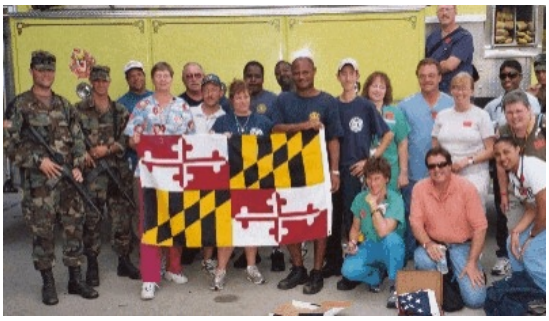
The largest single natural disaster in U.S. history began on August 29, 2005, when Hurricane Katrina came ashore, striking three Gulf Coast states. Americans were both stunned and eager to help the storm's victims. Fortunately, the Maryland Defense Force (MDDF), and its Medical Reserve Corps, was ready to respond. Its motto: *Officio vocante parati* ("Ready when called").

Governor Robert Ehrlich was notified through the Emergency Management Assistance Compact (EMAC) (www.emacweb.org) that Aaron Broussard, the president of Jefferson Parish in Louisiana, had put out a call for help in meeting the medical needs of the area's 452,000 residents. Governor Ehrlich activated the MDDF, a volunteer organization within a military structure, comprising health care professionals willing to go to the site of a natural or manmade disaster to provide medical, psychological, and legal resources for the affected population. Deployment to Louisiana in response to Hurricane Katrina marked the first time the MDDF had been called to service outside the state during its 88-year history. (The MDDF was created by the Maryland legislature in 1917 [http://www.mddefenseforce.org/history.htm].)



As part of this mobilization of resources in Maryland, medical relief efforts were coordinated by the Maryland Department of Health and Mental Hygiene (DHMH) and the Maryland Institute for Emergency Medical Services Systems (MIEMSS), with oversight provided by the Maryland Emergency Management Agency as chief coordinating body. DHMH solicited volunteer help by sending e-mail to departments of medical-, nursing-, and emergency-preparedness institutions. The Baltimore City Medical Society, led by its president, Dr. Tyler Cymet, was extremely effective in coordinating the communication and logistics for many of the responders from Baltimore. Interested doctors, nurses, and emergency medical services (EMS) personnel responded by phone or via the Internet with their availability, license, and contact information.

On September 5, 2005, an initial team of 80 volunteers convened at Martin State Airport, in preparation for takeoff in two C130 cargo planes operated by the Maryland National Guard. Prior to departure, each volunteer was inducted into the Guard by Brigadier General Fred Smalkin. Governor Erhlich, in his role as Commander-in-Chief, attended the ceremony. Induction into the MDDF conferred eligibility for workers' compensation and liability protection under Maryland law, eligibility

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Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
2006		**00-00-2006 to 00-00-2006**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Operation Lifeline: Health Care Professionals from Maryland Respond to Hurricane Katrina	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **State Defense Force Publication Center,19819 Maycrest Way,Germantown,MD,20876-6339**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES
See also ADA494464. Pub in: State Defense Force Journal, Vol. 2, Issue 1, Spring 2006. © 2008 State Defense Forces Publications Center. Creative Commons Attribution License.

14. ABSTRACT

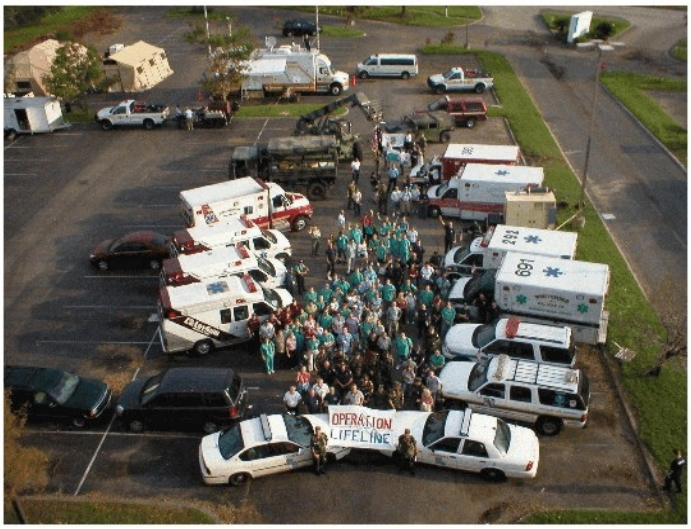
15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**4**	

for military airlift and logistical support, as well as the benefits of an administrative structure. The mission of the operation was defined as follows: "The people of the State of Maryland, in response to the catastrophic damage of Hurricane Katrina, will use all available resources to provide effective humanitarian, medical and disaster relief to the citizens of Jefferson Parish, Louisiana."

After landing at the New Orleans Naval Air Station, our convoy traveled to West Jefferson Hospital in Jefferson Parish under the protection of Maryland National Guards, militia, and police forces. West Jefferson Hospital was one of only three hospitals of the original 18 in the New Orleans area that remained operational after the storm. Our initial mission was to staff this county hospital, whose staff had been working nonstop for more than a week. Upon arrival, we learned that local physicians and nurses had begun returning to the area and were resuming medical care for the community. Therefore, within 12 hours, we were redeployed to serve another mission. In an unprecedented move, Meadowcrest Community Hospital, which had been evacuated, was taken over under the mandate of martial law and converted to a command center for the MDDF.

Housed in this 4-story hospital were more than 130 physicians, nurses, paramedics, emergency medical technicians, pharmacists, health officers, and militia from agencies and organizations throughout the State of Maryland. Hours after arrival, the MDDF was met by a convoy of 40 vehicles from almost every county in Maryland. The Anne Arundel County Fire Department Mobile Command & Communications Unit, a one million dollar command center purchased with homeland security funding for the state, served as the intelligence headquarters for this endeavor, named Operation Lifeline.



On the first day of our operation, physicians and other health professionals readied the facility to receive patients: we mopped floors, cleaned bathrooms, and begin securing necessary supplies. The abandoned hospital provided most of the needed items we had not been able to bring along. The hospital was filled with evidence of a hurried exit prior to the full impact of Katrina—food was rotting in walk-in freezers, party platters of chicken sat in the physical therapy suite, and alarms were going off in the laboratory, the floors of which were now covered with an unknown liquid. The newspaper box in front of the hospital displayed its most recent publication, with a headline that read, "Katrina is Coming." Although we had electricity and tepid water for showering, the kitchen was not operational, and our sleeping quarters were in need of a thorough cleaning—by us. Many of us had never slept in a hospital bed before. We brought one day's worth of food with us and later ate meals ready to eat (MREs) or boxed lunches delivered to us from a local restaurant that had survived the storm.

Within 24 hours after our command center was established at Meadowcrest Hospital (on Day 3 of the mission), our operations were expanded to six outreach clinics in diverse locations throughout Jefferson Parish. Four of them did not have running water or electricity. Many were in dangerous areas.

Each site had two to four armed national guardsmen for protection. Each clinic was staffed by a team of 10 or more physicians, nurses, pharmacists, and ancillary medical personnel.

The two major academic institutions in Baltimore had pivotal roles in Operation Lifeline. The University of Maryland School of Medicine sent 14 physicians, and the University of Maryland Medical Center sent a pediatric nurse as well as $6000 worth of pharmaceuticals. Johns Hopkins Medicine sent an organized team of physicians, nurses, mental health professionals, pharmacists, and a sign language interpreter.

Operation Lifeline began seeing patients on Wednesday, September 7. Fifty-six patients were treated that first day. The numbers of patients increased steadily during the next 12 days, peaking at 872 on Monday, September 19. The influx came as community residents spread the word about our presence and the services we were offering. For many residents, we were their only contact with the world beyond their neighborhood. Some of them had no idea of the extent of the devastation in the region.

The types of patients seen represented a primary care practitioner's typical day, with one exception: the large number of patients seen solely because they had run out of medication. On the first day of service at Herbert Wallace Fire Station, the clinic base for Team Charlie, Ms. Mildred, an 82-year-old woman cautiously sought our attention, complaining of fatigue. She was the self-described community watchdog, so we suspected she really was here to check us out. Several days later, she returned with a true need, having run out of her blood pressure medicine. Other cases included incision and drainage of abscesses, acute red eye, lacerations, and respiratory ailments. We administered many tetanus vaccines and dispensed food, water, and ice.

When we were not seeing patients, we walked rescue supplies to cars lined up around the block. Residents had quickly learned by word of mouth that our six sites were resource stations for more than medical care. The American Red Cross was there as well, serving hot meals from a specially equipped van.

Trauma care was also rendered on site, though not planned. One evening a man drove up to our operations site at Meadowcrest with a shotgun wound inflicted by his wife, who thought he was an intruder. He was quickly loaded into one of 20 parked ambulances and transported to one of only three hospitals open and able to receive trauma cases.

On September 11, 2005, we assembled in front of Meadowcrest Hospital, as the first wave of the MDDF response prepared to head back to Baltimore after a one-week tour of duty, having been replaced by a new cadre of medical volunteers. We were moved by the call for all personnel to gather around the American, Maryland, and Louisiana flags (flying at half mast), as we stood in remembrance of those who lost their lives in an unnatural disaster four years earlier.

The MDDF deployment ultimately involved 250 sworn volunteers, who treated 6300 patients. The operation ended after 18 days for two reasons. First, the parish government, while deeply appreciative of our presence, was ready to begin reestablishing medical services provided by local practitioners using local resources. Parish President Broussard felt that our continued presence might delay the process of true recovery. Second, Hurricane Rita was possibly aiming for Louisiana, so the military instructed us to leave that area, now at risk of further damage.

Previous disasters and mass casualty incidents have shown that, when well-intentioned responders, including health care providers and mental health professionals, rush to an affected area, they can easily become part of the problem rather part of the solution. These Good Samaritans must be organized into effective response strategies and must be fed, housed, and protected. In many scenarios, the resources to provide those basic necessities simply are not available. The Maryland Defense Force, with its integral military command and control structure, allows a streamlined, efficient, and well-informed disaster response. We encourage other state and local governments to examine our process and establish similar collaborations among government agencies, military forces, and civilian professional resources, so that response systems are in place throughout the country and ready to be deployed in times of public need.[2]

[2] The authors thank Jakub Simon, MD, and Casey Jason, MD, from the University of Maryland School of Medicine, for their contributions to this report. They gratefully acknowledge the thoughtful reviews provided by Brigadier General Fred Smalkin and Colonel Wayne Nelson, from Maryland Defense Force. And they thank Linda J. Kesselring, MS, ELS, from the Division of Emergency Medicine at the University of Maryland, for copyediting the manuscript.